

USSN 10/734,078

REMARKS

This Response and RCE are in reply to the Decision of the Board of Patent Appeals and Interferences mailed December 20, 2010.

The Board reversed the previous rejection of claims 11-16 as obvious under 35 USC 103(a) in view of Nishihata JP 2000-042755 (JP'755) taken with the Warnes US Patent 5,989,733 ('733 patent).

Applicant requests reconsideration of the rejection of claims 11 and 17 as obvious under 35 USC 103(a) in view of Gell US 4,116,723 taken with the Warnes US Patent 5,989,733.

In particular, Applicant has amended claim 11 to recite a coated article comprising a nickel base superalloy substrate consisting essentially of, in weight %, about 3% to about 12% Cr, up to about 15% Co, up to about 3% Mo, about 3% to about 10% W, up to about 6% Re, about 5% to about 7% Al, up to about 2% Ti, up to about 1% Fe, up to about 2% Nb, about 3% to about 12% Ta, up to about 0.07% C, about 0.030% to about 0.80% Hf, up to about 0.10% Zr, up to about 0.02% B, up to about 0.050% of a rare earth element, and balance Ni and incidental impurities, an outwardly grown, single phase platinum-modified diffusion aluminide bondcoat on the substrate, and a ceramic thermal barrier coating comprising zirconia disposed on the bondcoat wherein spallation life of the ceramic thermal barrier coating during cyclic oxidation is prolonged.

Applicant achieves the significant and unexpected prolongation of spallation life of a ceramic thermal barrier coating by virtue of

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Applicant's claimed combination of recited nickel base superalloy composition having the recited Hf concentration with or without a rare earth element/the outwardly grown, single phase platinum-modified diffusion aluminide bondcoat/the thermal barrier coating of pending claim 11 in a way nowhere suggested by the cited references taken alone or together.

Applicant's Figure 3 and specification page 7, last paragraph show such achievement using a nickel base superalloy composition without Y such that the criticality of the claimed Hf concentration is evident and such that Y is optionally present in the composition. Also see Figure 4.

Applicant's discovery of the significant and unexpected prolongation of spallation life of a ceramic thermal barrier coating by virtue of Applicant's claimed combination of the particular recited nickel base superalloy composition/the particular outwardly grown, single phase platinum-modified diffusion aluminide bondcoat/the particular thermal barrier coating of pending claim 11 is believed to merit patent protection pursuant to accepted patent law.

Amended claim 11 is believed to be allowable as indicated by the Board on page 17, last paragraph of the Decision. Claim 17 depends from claim 11 and is believed allowable also.

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Reconsideration of the rejection of claims 11 and 17 as obvious under 35 USC 103(a) in view of Shaw US 3,382,167 taken with the Warnes US Patent 5,989,733 also is requested in view of the Board's comments such as on page 17, last paragraph of the Decision and in view of Applicant's achievement of significant and unexpected prolongation of spallation life of a ceramic thermal barrier coating by virtue of Applicant's claimed combination of the particular recited nickel base superalloy composition having the recited Hf concentration with or without a rare earth element/the particular outwardly grown, single phase platinum-modified diffusion aluminide bondcoat/the particular thermal barrier coating of pending claim 11 in a way nowhere suggested by the cited references taken alone or together.

Amended claim 11 as well as claim 17 depending therefrom are believed to be allowable.

Reconsideration of the rejection of claims 11 and 17 as obvious under 35 USC 103(a) in view of Gell US 4,116,723 taken with the Spitsberg US Patent 6,551,423 also is requested in view of the Board's comments such as on page 17, last paragraph of the Decision and in view of Applicant's achievement of significant and unexpected prolongation of spallation life of a ceramic thermal barrier coating by virtue of Applicant's claimed combination of the particular recited nickel base superalloy composition having the recited Hf concentration with or without a rare earth element/the particular outwardly grown, single phase platinum-modified diffusion aluminide bondcoat/the particular thermal barrier coating of pending claim 11 in a way nowhere suggested by the cited references taken alone or

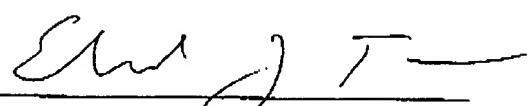
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together.

Amended claim 11 as well as claim 17 depending therefrom are believed to be allowable.

The pending claims 11-15 and 17 are believed to be in allowable condition, and action to that end is requested.

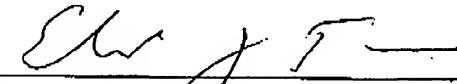
Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent Office to number 1-571-273-8300 on February 8 2011.



Edward J. Timmer